Nine pts. (10,1%) treated with artemether i.m., 1 pts. with 2 complications died (11%). Only 1 pts. with 2 complications (2,3%) treated with quinine i.v and survive.

Conclusion: Mortality of severe malaria in Manado is 15,7% which is comparable to the SEAQUAMAT study. Jaundice and acute renal failure are the commonest complications. Four or more complications have worst prognosis.

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47.025

Prevalence of Concomitant Infections of *Plasmodium falciparum* and *Wuchereria bancrofti* in Mosquito and Human Populations in Malindi, Kenya

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Background: Malaria and filariasis are co-endemic along the Kenyan coast. *Anopheles gambiae s.l* and *An. funestus* are the important vectors of the two diseases. Studies were carried out to determine prevalence of concomitant infections of *Plasmodium falciparum* and *Wuchereria bancrofti* in human and mosquito populations in 2 villages Shakahola and Jilore of Malindi, Kenyan coast.

Methods: Mosquitoes were collected using the pyrethrum spray sheet and identified using taxonomic keys. The head, thorax and abdomen were dissected separately for filarial worms and the debris of heads and thoraces were crushed and examined by ELISA for antibodies to circumsporozoite proteins of P. falciparum. Thin and thick smears were used to detect malaria parasites in human blood while microscopy was used to detect microfilariae in blood.

Results: Anopheles gambiae s.l and *A. funestus* harboured 100% of *Plasmodium falciparum* in Shakahola village while *A. gambiae* transmitted 96.7% and 95% for *P. falciparum* and *W. bancrofti* respectively in Jilore village. The annual transmission potential was 58.4 in Jilore and 11 in Shakahola, while microfilariae prevalence was significantly higher in Jilore (16.0%) than in Shakahola (2.8%). Concomitant infections occurred in 1.15% *An. gambiae s.l* but only 0.1% harboured the infective stages of both parasites. No humans in Shakahola had co-infections while 4.3% of the sample population in Jilore harbored both parasites.

Conclusion: The prevalence of malaria and bancroftian filariasis is area specific and transmission of the two parasites is vector species specific. Concomitant infections occur in the same vector but their concurrent transmission is rare. There is need to integrate control of malaria and bancroftian filariasis control in areas where they co-exist.

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Immune Adults with Imported Disease and Children from Endemic Area

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Cytokines are supposed to be involved in *P. falciparum* malaria pathogenesis. However, their relationship with manifestations of the disease in individuals with imported infection has been rarely studied as most research is performed in malaria endemic areas. The aim of this study was to evaluate the association between clinical course of malaria and the serum levels of selected cytokines in non-immune adults with imported malaria and Angolan children. The study was performed at Interfaculty Institute of Maritime and Tropical Medicine in Gdynia, Poland and Sao Lucas Medical Center in Kifangondo, situated in malaria holoendemic region of Angola. 169 patients with malaria were included into the study, 54 of them being residents of Angola. Serum concentrations of IL-18, IL-12, IL-6, IFNγ, IL-10 were determined on admission with the use of enzyme-linked immunosorbent assays. In 46 aparasitemic and asymptomatic patients measurements were repeated after the recovery. Altogether 45 patients met the WHO criteria for severe malaria. Significant associations between a number of pro- and antiinflammatory cytokines serum levels and severity of the disease were noted in African and Polish groups of patients. Severe malaria in both groups of patients was associated with elevated level of IL-10 and IL-18 and in non-immune adults with severe infection relative deficiency of IL-12 mediated response was noted. The latter was not seen in Angolan children, in which severe malarial anemia was characterized by high IFNγ expression. The excessive inflammatory response pattern demonstrated in the study by high IL-18 expression may be the common feature of severe malaria in non-immune adults as well as children from endemic regions. Further studies are planned on larger group of patients to determine their involvement in particular clinical manifestations of the infection.

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